

10 Years of Development in Model-Based OpenBIM Workflow in Infrastructure Surveying in Finland from a Surveyor's Perspective.

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SUMMARY

Model-based construction and openBIM practices are still new topics for many parts of the world, what comes to infrastructure construction.

In Finland openBIM and model-based infrastructure construction surveying have been an industry practice for the last 6 years. The major change started with the publication of world's first Common InfraBIM Requirements (YIV2015) in 2015. This was a new model-based guideline for infrastructure project and it also included for the first time a common classification systems for infrastructure project with common data management processes, file structures and survey control.

All this was a result from a joint development effort from public and private players in the industry, so that all could gain from the end results. Since then the common infrastructure BIM requirements in Finland have progressed to the second version (YIV2019) updating the latest best practices to the guidelines.

One major addition in 2019 was a clear role definition for a BIM Manager in production in infrastructure projects. Someone, who has the overall responsibility for making sure that all models in a project meet the requirements, all systems run in the same coordinate reference in the project and that all as-build data gets collected in the right way especially in projects, where machine control systems are widely used. Task that in practice had often fallen to an experienced surveyor on site, but with very varying responsibilities and without clearly defined tasks.

What we have learned so far is that changing an industry with over 100 years of existing practices takes time, but it is not impossible.

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From a surveyor's perspective the core surveying principles in now digital process are still the same, but there has been a major shift on how many people actually now handle geospatial data on construction sites and expect it to be correctly positioned.

With our surveyor's perspective to the change process we want to offer some insights and perspective to how model-based construction actually affects surveying and how common practices with holistic educational approach to the industry can make the change lasting.

In Finland there is no more turning back to the old ways of hammering stakeout stick to the field and with new coming openBIM and machine control data exchange standards more is expected. Hopefully our experiences from will help someone else in the coming change process in their own countries and also initiate some new cooperation on this field now that sharing information is not limited to one location or specific office desk.

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